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| 10/783,299      | 02/20/2004  | Daniel Bertram       | DC-06303            | 7828             |

  

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| EXAMINER           |
|--------------------|
| DUONG, CHRISTINE T |

  

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 2616     |              |

  

| NOTIFICATION DATE | DELIVERY MODE |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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## Office Action Summary

Application No.

10/783,299

Applicant(s)

BERTRAM ET AL.

Examiner

Christine Duong

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-13 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 6 and 14-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

This is in response to the Applicant's arguments and amendments filed on 11 October 2007 in which claims 1-20 are currently pending.

### *Claim Objections*

1. **Claims 2-8, 10-16, 18-20** are objected to because of the following informalities:

Regarding claim 7, it is suggested to rewrite "the communication components" in lines 1-2 as --the network communication components--.

**Claims 2-8, 10-16** and **18-20** recite the limitation "Claim" in line 1. It is suggested to replace "Claim" in line 1 with --claim--.

Appropriate correction is required.

### *Claim Rejections – 35 USC § 102*

2. **Claims 1, 3-5, 7-8, 17-20** are rejected under 35 U.S.C. 102(e) as being anticipated by Knop et al. (PG Pub US 2005/0013255 A1).

Regarding **claim 1**, Knop et al. discloses a system for remote configuration of an information handling system (**Fig. 1**), the system comprising:

a remote deployment management station (**a graphical user interface provided by the availability unit 102 or by the monitor unit 104**) operable to deploy configurations to plural information handling systems (**computers 108, 110, etc.**) ("**a graphical user interface is provided to a user by the availability unit 102 for input of initialization information, including such information as a base Internet Protocol (IP) address, a subnet mask and a list of logical names of all**

**interfaces in a cluster. Alternatively, the graphical user interface of step 404 can be provided by the monitor unit 102, or a separate unit or system. In step 406, a user enters or supplies the initialization information into the graphical user interface”, [0047] lines 1-9);**

**an information handling system (computers 108 or 110) interfaced with the remote deployment management station by one of plural network communication components, the plural network communication components operating in an unconfigured state (“the computer system of FIG. 7 can be a more detailed representation of the monitor unit or one of the computers connected to the network”, [0103] lines 3-5 and “the computer system may also include a communications interface 724. Communications interface 724 allows software and data to be transferred between the computer system and external devices. Examples of communications interface 724 may include a modem, a network interface (such as an Ethernet card), a communications port, a PCMCIA slot and card, etc.”, [0106] lines 1-7);**

**a configuration agent (the following elements either alone or in combination of availability unit 102 and computer 108 or 110) running on the information handling system and operable to configure the network communication components (“the availability unit 102 does some configuration discovery of the available network interfaces so that the user does not have to explicitly specify the list of network interfaces”, [0038] lines 10-13);**

a management connection engine **(the following elements either alone or in combination of monitor unit 104 and computer 108 or 110)** running on the information handling system and operable to determine if a network communication component connects with the remote deployment management station after configuration by the configuration agent **(“the computers 108 through 110 of the network 106 are monitored for connectivity. This typically includes the transmission of monitoring messages between the nodes of the cluster via each of the network interfaces. Based on the reception or non-reception of such monitoring messages, the functionality (i.e., connectivity status) of each network interface is determined”, [0040] lines 1-7);**

and a configuration adjustment engine **(the following elements either alone or in combination of availability unit 102 and computer 108 or 110)** running on the information handling system and interfaced with the management connection engine, the configuration adjustment engine operable to adjust the configuration of the network communication component if the management connection engine determines the network communication component fails to connect with the remote deployment management station after configuration by the configuration agent **(“the availability unit 102 proceeds to initiate and perform recovery procedures due to any unavailable network interfaces. Such recovery functions allow the system to recover when one or more network interfaces are not responding”, [0044] lines 1-5).**

Regarding **claim 3**, Knop et al. discloses everything claimed as applied above (see *claim 1*). In addition, Knop et al. discloses the configuration adjustment engine is further operable to adjust the configuration by applying configuration information of each of the plural network communication components to the one network communication component to determine if the one network communication component establishes communication with the configuration information of another of the plural network communication components (**“recovery includes the re-routing of communications from a non-responsive network interface to another responsive network interface”**, [0044] lines 5-7).

Regarding **claim 4**, Knop et al. discloses everything claimed as applied above (see *claim 3*). In addition, Knop et al. discloses the configuration adjustment engine is further operable to adjust the configuration by setting the network communications device to communicate with a dynamic Internet address if the network communication component is unable to establish communication with the remote deployment management system by application of the configuration information of the plural network communication components (**“the availability unit 102 proceeds to initiate and perform recovery procedures due to any unavailable network interfaces. Such recovery functions allow the system to recover when one or more network interfaces are not responding”**, [0044] lines 1-5 and **“the calculated monitoring addresses are assigned to the network interfaces as additional network interface addresses using IP aliasing, which is a feature of the IP protocol that allows for**

**the assignment of one or more additional IP addresses to a network interface”, [0077] lines 5-9).**

Regarding **claim 5**, Knop et al. discloses everything claimed as applied above (see *claim 4*). In addition, Knop et al. discloses the configuration agent is further operable to send a message by the dynamic Internet address to the remote deployment server that a configuration error has occurred (“**the monitoring process delivers a failure notification for the monitoring address. In response, the recovery process determines the network interface that is currently assigned that monitoring address based on the network interface name, and then determines any addresses for recovery that are also assigned to that network interface. The recovery process then performs the appropriate recovery action using the recovery addresses for that network interface**”, [0097] lines 1-9).

Regarding **claim 7**, Knop et al. discloses everything claimed as applied above (see *claim 4*). In addition, Knop et al. discloses the communication devices comprise network interface cards (“**computer 108 is connected to network 106 via three network interface adapters 211, 213, and 215. Similarly, computer 110 is connected to network 106 via three network interface adapters 221, 223, and 225. A network interface adapter, often abbreviated as NIC, is an expansion board, PCMCIA card, built-in device or some other module coupled to a computer so as to interface the computer with a network 106**”, [0031] lines 4-11).

Regarding **claim 8**, Knop et al. discloses everything claimed as applied above (see *claim 7*). In addition, Knop et al. discloses the configuration information comprises

static IP addresses for the network interface cards (**“static monitoring addresses are allocated to the network interfaces, with the monitoring addresses adhering to the address requirements of the monitoring process”, [0045] lines 6-9).**

Regarding **claim 17**, Knop et al. discloses an information handling system (**Fig. 7**) comprising:

plural network communication components (**computers 108, 110, etc**), each operable to communicate with a dynamic or static address (**“computer 108 is connected to network 106 via three network interface adapters 211, 213, and 215. Similarly, computer 110 is connected to network 106 via three network interface adapters 221, 223, and 225. A network interface adapter, often abbreviated as NIC, is an expansion board, PCMCIA card, built-in device or some other module coupled to a computer so as to interface the computer with a network 106”, [0031] lines 4-11 and “static monitoring addresses are allocated to the network interfaces, with the monitoring addresses adhering to the address requirements of the monitoring process”, [0045] lines 6-9);**

a configuration agent (**the following elements either alone or in combination of availability unit 102 and computer 108 or 110**) operable to apply configuration information to the network communication components (**“the availability unit 102 does some configuration discovery of the available network interfaces so that the user does not have to explicitly specify the list of network interfaces”, [0038] lines 10-13);**



a management connection engine **(the following elements either alone or in combination of monitor unit 104 and computer 108 or 110)** operable to determine whether the network communication components are able to communicate over a network **(“the computers 108 through 110 of the network 106 are monitored for connectivity. This typically includes the transmission of monitoring messages between the nodes of the cluster via each of the network interfaces. Based on the reception or non-reception of such monitoring messages, the functionality (i.e., connectivity status) of each network interface is determined”, [0040] lines 1-7);** and

a configuration adjustment engine **(the following elements either alone or in combination of availability unit 102 and computer 108 or 110)** interfaced with the management connection engine and operable to adjust the configuration of the network communication components that are unable to communicate over the network after application of the configuration information by the configuration agent **(“the availability unit 102 proceeds to initiate and perform recovery procedures due to any unavailable network interfaces. Such recovery functions allow the system to recover when one or more network interfaces are not responding”, [0044] lines 1-5).**

Regarding **claim 18**, Knop et al. discloses everything claimed as applied above (see *claim 17*). In addition, Knop et al. discloses the network communication components comprise NICs operable to communicate with a static address when configured with a correct IP address **(“static monitoring addresses are allocated to**

**the network interfaces, with the monitoring addresses adhering to the address requirements of the monitoring process”, [0045] lines 6-9).**

Regarding **claim 19**, Knop et al. discloses everything claimed as applied above (see *claim 18*). In addition, Knop et al. discloses the configuration adjustment engine applies the IP addresses of each NIC to a selected NIC to attempt to communicate over the network (“**the availability unit 102 switches the affected line of communication from the non-responsive network interface to another network interface (on the same computer or on a mirror computer offering the same critical data or applications). For example, the affected base address or service address (i.e., the address through which network clients access an application on the server) can be moved to the new network interface to re-route the communications through the other network interface**”, [0044] lines 9-18).

Regarding **claim 20**, Knop et al. discloses everything claimed as applied above (see *claim 19*). In addition, Knop et al. discloses the configuration adjustment engine commands a selected NIC to communicate with a dynamic address if communication fails with each of the IP addresses (“**the availability unit 102 proceeds to initiate and perform recovery procedures due to any unavailable network interfaces. Such recovery functions allow the system to recover when one or more network interfaces are not responding**”, [0044] lines 1-5 and “**the calculated monitoring addresses are assigned to the network interfaces as additional network interface addresses using IP aliasing, which is a feature of the IP protocol that allows for**

**the assignment of one or more additional IP addresses to a network interface”,**  
**[0077] lines 5-9).**

***Claim Rejections – 35 USC § 103***

3. **Claims 2, 9-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Knop et al. further in view of Pham et al. (US Patent No. 6,629,145 B1).

Regarding **claim 2**, Knop et al. discloses everything claimed as applied above (see *claim 1*). However, Knop et al. fails to specifically disclose that the configuration adjustment engine adjusts the configuration by setting the network communications device to communicate with a dynamic Internet address and send a re-configuration request to the remote deployment management station, as claimed.

Nevertheless, Pham et al. teaches **“a DHCP client relies on a remote DHCP server to dynamically provide a unique IP address to the client”** (Pham et al. Column 2, lines 5-6) and **“the configuration management system 56, however, remains operative in a wait state receptive to further configuration management commands to configure or reconfigure the server appliance 12”** (Pham et al. Column 9, lines 32-35).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to retrieve network configuration information using a dynamic address because **“The IP address is either statically assigned through an initial configuration procedure performed locally to the computer system or dynamically assigned through the operation of a conventional pull-protocol, such as the dynamic host configuration protocol (DHCP)”** (Pham et al. Column 1, lines

**62-67) and because “a network computer system to be initially configured and subsequently reconfigured without requiring some on-site and site-specific configuration to be performed before the computer system can be connected to and managed from a network” (Pham et al. Column 2, lines 41-45).**

Regarding **claim 9**, Knop et al. discloses a method for remote configuration through a network of an information handling system (**Fig. 1**), the method comprising:

retrieving network configuration information through a network communication component (**network interface**) of the information handling system (**computer 108 or 110**) using a dynamic address (**“the availability unit 102 does some configuration discovery of the available network interfaces so that the user does not have to explicitly specify the list of network interfaces”, [0038] lines 10-13**);

applying the network configuration information to the network communication component (**“the generation of network interface addresses for each network interface in the cluster based on the initialization information of step 304. This step further includes automatic assignment of the network interface addresses to each network interface for monitoring by the monitor unit 104”, [0039] lines 3-8**);

attempting network communication with the network communication component using a static address determined from the network configuration information (**“static monitoring addresses are allocated to the network interfaces, with the monitoring addresses adhering to the address requirements of the monitoring process”, [0045] lines 6-9**);

determining that the attempted network communication failed (**“monitor unit 104 determines whether any of the network interfaces are not responding”**, [0043] lines 1-2;

automatically adjusting the network communication component configuration at the information handling system (**“such recovery functions allow the system to recover when one or more network interfaces are not responding. Recovery includes the re-routing of communications from a non-responsive network interface to another responsive network interface”**, [0044], lines 3-7); and

communicating with the network through the adjusted configuration of the network communication component (**“the affected base address or service address (i.e., the address through which network clients access an application on the server) can be moved to the new network interface to re-route the communications through the other network interface”**, [0044] lines 14-18).

However, Knop et al. fails to specifically disclose that retrieving network configuration information through a network communication component of the information handling system using a dynamic address, as claimed.

Nevertheless, Pham et al. teaches **“a DHCP client relies on a remote DHCP server to dynamically provide a unique IP address to the client”** (Pham et al. Column 2, lines 5-6).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to retrieve network configuration information using a dynamic address because **“The IP address is either statically assigned through an**

**initial configuration procedure performed locally to the computer system or dynamically assigned through the operation of a conventional pull-protocol, such as the dynamic host configuration protocol (DHCP)” (Pham et al. Column 1, lines 62-67).**

Regarding **claim 10**, Knop et al. and Pham et al. discloses everything claimed as applied above (see *claim 9*). In addition, Knop et al. discloses automatically adjusting further comprises: adjusting the network communication component to communicate with a dynamic address (“**the availability unit 102 proceeds to initiate and perform recovery procedures due to any unavailable network interfaces. Such recovery functions allow the system to recover when one or more network interfaces are not responding**”, [0044] lines 1-5 and “**the calculated monitoring addresses are assigned to the network interfaces as additional network interface addresses using IP aliasing, which is a feature of the IP protocol that allows for the assignment of one or more additional IP addresses to a network interface**”, [0077] lines 5-9).

Regarding **claim 11**, Knop et al. and Pham et al. discloses everything claimed as applied above (see *claim 10*). In addition, Knop et al. discloses communicating with the network through the adjusted configuration further comprises: sending a report that the network configuration information is erroneous; and receiving new network configuration information (“**the monitoring process delivers a failure notification for the monitoring address. In response, the recovery process determines the network interface that is currently assigned that monitoring address based on the network**

**interface name, and then determines any addresses for recovery that are also assigned to that network interface. The recovery process then performs the appropriate recovery action using the recovery addresses for that network interface”, [0097] lines 1-9).**

Regarding **claim 12**, Knop et al. and Pham et al. discloses everything claimed as applied above (see *claim 11*). In addition, Knop et al. discloses the network communication component comprises a NIC (“**computer 108 is connected to network 106 via three network interface adapters 211, 213, and 215. Similarly, computer 110 is connected to network 106 via three network interface adapters 221, 223, and 225. A network interface adapter, often abbreviated as NIC, is an expansion board, PCMCIA card, built-in device or some other module coupled to a computer so as to interface the computer with a network 106**”, [0031] lines 4-11) and the configuration information comprises a static IP address of the NIC (“**static monitoring addresses are allocated to the network interfaces, with the monitoring addresses adhering to the address requirements of the monitoring process**”, [0045] lines 6-9).

Regarding **claim 13**, Knop et al. and Pham et al. discloses everything claimed as applied above (see *claim 10*). In addition, Knop et al. discloses automatically adjusting further comprises: determining the configuration information of a second network communication component of the information handling system; and applying the configuration information of the second network communication component to the first network communication component (“**the availability unit 102 switches the affected**

line of communication from the non-responsive network interface to another network interface (on the same computer or on a mirror computer offering the same critical data or applications). For example, the affected base address or service address (i.e., the address through which network clients access an application on the server) can be moved to the new network interface to re-route the communications through the other network interface”, [0044] lines 9-18).

***Allowable Subject Matter***

4. Claims 6, 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

1. Applicant's arguments in regards to claims 1, 9 and 17 have been fully considered but they are not persuasive.

In response to Applicants' arguments regarding claims 1, 9 and 17 that Knop fails to teach, disclose or suggest “a configuration adjustment engine running on the information handling system” as recited by claim 1; “automatically adjusting the network communication component configuration at the information handling system” as recited by claim 9; and an information handling system comprising “a configuration adjustment engine” as recited by claim 17, it has been indicated in the examiner's First Office Action that Knop teaches “the availability unit 102 proceeds to initiate and perform recovery procedures due to any unavailable network interfaces. Such recovery functions allow the system to recover when one or more network interfaces are not



responding" (Knop [0044] lines 1-5) and that "such recovery functions allow the system to recover when one or more network interfaces are not responding. Recovery includes the re-routing of communications from a non-responsive network interface to another responsive network interface" (Knop [0044] lines 3-7). Additionally, Knop discloses "the availability unit 102 and the monitor unit 104 are processes running on one of the computers 108 through 110 of the cluster, or on one or more additional computers or servers that are connected to the network 106" (Knop [0029] lines 14-18). Therefore, Knop does teach that a configuration adjustment engine runs on the information handling system; automatically adjusting the network communication component configuration at the information handling system; and an information handling system comprising a configuration adjustment engine.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Duong whose telephone number is (571) 270-1664. The examiner can normally be reached on Monday - Friday: 830 AM-6 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CTD 12/13/2007 CTD

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